Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of fabricating an ink jet printhead chip for use with a pulsating pressure ink supply, the printhead chip having a substrate that incorporates drive circuitry layers, a plurality of nozzle arrangements, each nozzle arrangement having nozzle chamber walls that define a nozzle chamber and an ink ejection port in fluid communication with the nozzle chamber, a plurality of ink supply channels defined through the substrate to be in fluid communication with respective nozzle chambers and an actuator that is fast, at one end, with the substrate and arranged with respect to the nozzle chamber to drive a closure member on an opposite end of the actuator between an open position in which ink is ejected from the ink ejection port and a closed position in which ink is inhibited from being ejected, the method comprising the steps of:

depositing a layer of a sacrificial material on a substrate that incorporates drive circuitry layers positioned on a wafer substrate;

etching the layer of sacrificial material to define deposition zones for the actuators;

depositing a first layer of a thermally expandable actuator material on the deposition zones;

etching the first layer of actuator material and the drive circuitry layers to define deposition zones for a conductive material of the actuators and for vias for heating circuits of the actuators;

depositing a layer of a conductive material on the first layer of actuator material;

etching the layer of conductive material to define a heating circuit for each actuator;

depositing a second layer of actuator material on the layer of conductive material so that the heating circuits are embedded in the actuator material;

etching the actuator material to define the actuators and the closure members;

forming the nozzle chamber walls with a suitable deposition and subsequent etching technique;

etching away the sacrificial layer to free each actuator and closure member; and

etching the ink channels through the substrate so that each ink channel is in fluid communication with a respective nozzle chamber.

2. (Original) A method as claimed in claim 1, in which the actuator material is etched so that each actuator is shaped so that, in a rest condition, the actuator encloses an arc, with each heating circuit being positioned so that when the actuator material is heated, differential thermal expansion of the actuator material causes the actuator to straighten at least partially and a subsequent cooling of the actuator material causes the actuator to return to its rest condition thereby displacing the closure member between the closed and open positions.

3. (Original) A method as claimed in claim 1, in which the actuator material is etched so that each closure member is positioned to close a respective ink inlet channel in its closed condition and to open the ink inlet channel in its open position.

4. (Currently amended) A method as claimed in claim 2, in which the step of etching the conductive layer is such that each heating circuit includes a heater positioned proximate an inside edge of the conductive material and a return trace positioned outwardly of the heater, so that an inside region of the actuator material is heated to a ~~relatively~~ greater extent with the result that the inside region expands to a greater extent that a remainder of the actuator material.

5. (Original) A method as claimed in claim 4, in which the step of etching the conductive layer is such that a serpentine length of conductive material defines each heater.

6. (Original) A method as claimed in claim 1, in which the steps of depositing the first and second layers of actuating material include the steps of depositing first and second layers of polytetrafluoroethylene and the step of depositing the layer of conductive material includes the step of depositing copper.

7. (Original) A method as claimed in claim 2, in which the actuator material is etched so that each actuator defines a coil that partially uncoils when the actuator material undergoes differential thermal expansion.

8. (Original) A method as claimed in claim 1, in which the nozzle chamber walls are fabricated so that the actuators and the closures are each positioned within respective nozzle chambers.